Comment: Degenerative changes of the incisors are uncommon in NTP studies. Incisor degeneration comprises a set of lesions that may not all be present concurrently. Early lesions include focal
mesenchymal cell vacuolation and osteodentin formation within the pulp. More severe lesions include focal or multifocal odontoblast degeneration with dentin niche formation (Figure 1 and Figure 2), abnormal organization of the dentin matrix, and altered matrix staining (Figure 3 and Figure 4). Breaks in the dentin layer may be seen with severe lesions. Incisor degeneration may be chemically induced and, at least in one case in rats, has been suggested to be secondary to injury to a selective population of preodontoblasts.

**Recommendation:** Tooth, Incisor - Degeneration should be diagnosed and graded whenever present. If the dentin layer appears normal and the odontoblasts only are undergoing degeneration or necrosis, then “tooth, odontoblast - degeneration” or “tooth, odontoblast - necrosis” should be diagnosed.

**References**


**Authors:**
Linda H. Kooistra, DVM, PhD, DACVP
Pathologist
Charles River Laboratories, Inc.
Research Triangle Park, NC

Abraham Nyska, DVM, Diplomate ECVP, Fellow IATP
Expert in Toxicologic Pathology
Visiting Full Professor of Pathology
Sackler School of Medicine, Tel Aviv University
Timrat Israel